TAGHeuer
PROFESSIONAL TIMING

PROCKET PRO
HL400-S
SWIMMING

User Manual

Version 09/2015

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1. Concept

The Pocket Pro Swimming App, Pocket Pro HL400-R, gives users access to timekeeping functions dedicated to swimming training and events.

Three swimming-specific modes offer the possibility to record and analyse number of strokes, differential times, average strokes as well as comparing the times of 2 swimmers at the same time and even timing of up to 9 swimmers with a mass start method.

All 3 modes offer the complete solution for swimming teachers and coaches with the added benefit to download all data and times for post training / event calculations and results.

Together with its integrated USB connector; free POCKET MANAGER Application and Pocket-Pro 800 measurements internal memory, this device makes downloading, analysis, printing and archiving of results extremely simple.

Results can also be viewed or printed from your laptop or pc instantly

The USB connector (HL400-4) enables connection to a photocell, a manual switch or a wireless radio input (HL615, HL675).
Pocket Pro Manager adjusts a Lock Time for the USB Input.

Note:
Pressing the hard reset (to the right of the USB connector) resets the Lock Time value to 0.01 sec (minium)

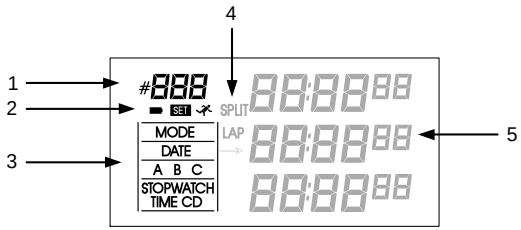
2. Standard Timing Mode

Several standard timing modes are available including:

Date / **Time** / **Count Down** / **Stopwatch**

More specific event orientated modes are also available, see section 3

2.1. LCD description



1. Sequence Number of athlete / Memory status
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Information Split / Lap
5. Timers

2.2. General

2.2.1. How to navigate the different modes

To navigate into a different mode:

- First the Pocket Pro has to be stopped (**STOP**)
- Reset memory (**START/STOP** + **MEMORY**)
- Pressing the **MODE** button now allows you to change the Timing Mode

Sequence:

DATE → **STOPWATCH** → **TIME** → **CD** → **A** → **B** → **C**

2.2.2. Power

The Pocket Pro functions with an internal battery. It can be recharged when by connecting to a PC (USB cable) or by a (USB – 5VDC) power supply

When not used for 36hours, the Pocket Pro will switch OFF automatically (LCD OFF)
To wake up the Pocket Pro, just press any button

It is also possible to switch OFF manually the Pocket Pro by simultaneously pressing the **MODE** and **MEMORY** buttons for 5 seconds

When the Pocket Pro is OFF, all the times are stored in memory
The icon ▬ will indicate the level of the battery

During charge:	75% ON / 25% OFF blinking
Fully charged:	with USB Cable: icon ON Without USB cable: icon OFF
Low level	(<10% charge): blinking 50% ON & 50% OFF (you still have 2-3 days autonomy)

2.2.3. Time Memory

The Pocket Pro has a memory of 800 stored times
The number of memorized times is shown on the 3 digits (Memory status)
When the memory reaches 90% capacity (720 times), the 3 digits will flash

Warning
Once the memory is full (800 times), the next time recorded will be stored as 001 automatically overwriting the original time

The memorized time can be recalled and displayed on the LCD at any time (even during a timing session)

By pressing the **MEMORY** button, the memorized time 001 will be displayed as the button is held down. The number of the memory shown is displayed on the top-left of the LCD

Press the **MEMORY** button again and the next stored time will be displayed

2.2.4. Delete Memory

To delete the memory, press simultaneously **START/STOP** and **MEMORY** buttons

> **Warning**
> You will not receive a request for you to “confirm Delete Memory”!
> Once this step is made, all times are irretrievably deleted

2.3. Date Mode

This mode allows you to update the date of the Pocket Pro
To set the date:

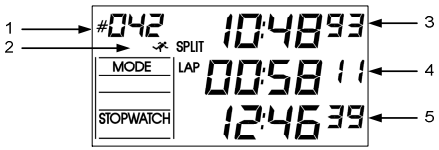
- Press the **MEMORY** button: the first digit will flash and **SET** icon is ON
- Press the **SPLIT/LAP** button to change the value
- Press the **MEMORY** button to move to the next digit

Validate your setting with the **MODE** button (**SET** icon is OFF)

1. Icon Set ON = Setting
2. Day/Month (red digit blinking 25.03)
3. Year setting (2013)
4. Time of Day (set in menu TIME)

2.4. STOPWATCH mode

This timing mode allows the timekeeper to make a Start/Finish, with split time (**SPLIT**) and lap time (**LAP**) with 1/100th second precision



1. Number of split / Memory status
2. Running status
3. Split time
4. Lap Time
5. Running time

The time displayed is up to 59'59.99'' (1 hour)

SPLIT : Split time, or cumulative time (**SPLIT/LAP** button)

LAP : Lap time (**SPLIT/LAP** button)

Running Time : Running time between Start and Finish

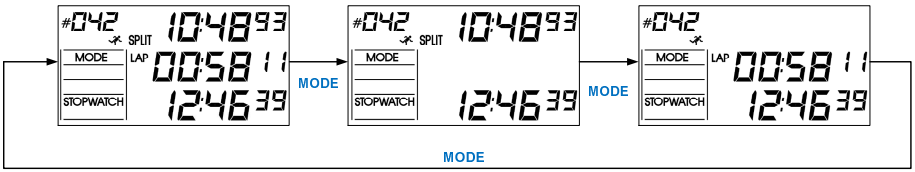
The running time always starts from **00:00:00**

- To start, press the **START/STOP** button (icon is ON)
- Three times are running and displayed
- To record a Split / Lap, press **SPLIT/LAP** Button

The **SPLIT** and **LAP** time is stopped. The running time (bottom) continues to run

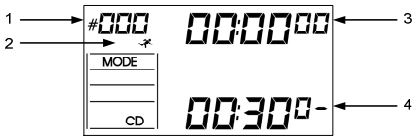
At each press of the **SPLIT/LAP** button, the memory sequence increases
It is possible to recall and view previous split and lap times during a session by pressing the **MEMORY** button

For simple viewing in this mode, it is possible to reduce the information, and display only **SPLIT** or **LAP**. For this, during the race, press the button **MODE**



2.5. Count Down mode (CD)

This mode allows you to make a unit count down or loop count-down



1. Number of split / Memory status
2. Running status
3. Counter
4. Count Down (max 59:59.9)

2.5.1 Set Count Down

To change the Count-Down value, the memory first has to be deleted
To set the Count-Down value:

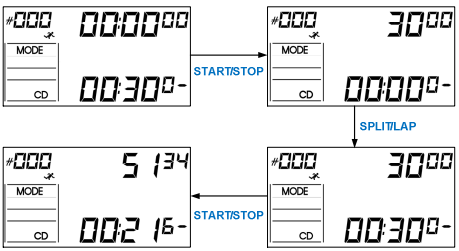
- Press the **MEMORY** button: the first digit will flash and **SET** icon is ON
- Press the **SPLIT/LAP** button to change the value
- Press again the **MEMORY** button to change to the next digit
- Validate your setting with the **MODE** button (**SET** icon is OFF)

2.5.1. Count Down timing

- To start the count down, press **START/STOP** button (icon is OFF)
- The count-down value decreases (on the bottom line)
- A timer (on the top) is started (increases)

At any time it is possible to **PAUSE** and **RESTART** the count-down
A long single beep will sound at the end of the Count-Down
The count-down will stop automatically at 00:00
To restart a new count-down, you have to reset the value by pressing the **SPLIT/LAP** button

During the count-down sequence, by pressing the **MODE** button, it is possible to change the Single Count-Down to Auto-Restart Count-down (loop mode)
The **CD** icon on the LCD will switch
In this Auto-Restart Count-Down, during the last 5 seconds, the Pocket Pro will sound a single short beep and a then long beep at 00:00
The Pocket Pro will restart automatically from the pre-defined time of the count-down
The timer will run and show the full time since the first Start
To stop the sequence, you have to RESET the Pocket Pro

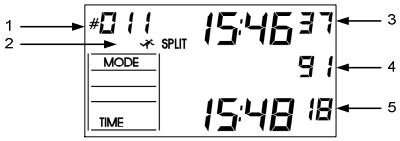


2.6. TIME Mode

This timing mode allows you to memorize the time of day at each split

This mode is very useful as a back-up system during a timing session and functions similarly to other timing systems working at “time-of-day” such as the CP545 Chrono-Printer, Mini Timer or Start Clock

In Time mode, you have the running time on the top line of the LCD and the time of day on the bottom line of the LCD



1. Number of split / Memory status
2. Running status
3. Running Time (hh:mm:ss)
4. Running Time (1/100)
5. Time of Day

2.6.1. Internal Time of Day setting

To set the Internal Time of Day on Pocket Pro:

- The Pocket Pro memory has to be reset (**START/STOP** + **MEMORY**)
- Press and hold the **MEMORY** button for 5 sec: the first digit will flash and **SET** icon is ON
- Press the **SPLIT/LAP** button to change the value
- Press the **MEMORY** button to move to the next digit

2.6.2. Time of day synchronisation

- Press **SPLIT/LAP** and **START/STOP** buttons simultaneously
- The time of day of the Pocket Pro will be displayed on the top of the LCD with 1 minute in advance
- The synchro will be automatic at the end of the full minute

2.6.3. To Synchronise at Zero

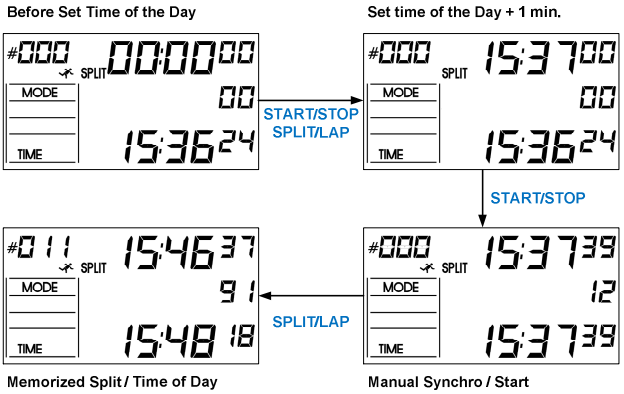
- Press **START/STOP** button

The time automatically starts from zero

2.6.4. Timing

Once the Synchronization is made, the icon appears

To memorize the time of day, press the **SPLIT/LAP** button
The time on the LCD will stay and the passing counter (top-left) is increased
To see the time of the day running, press the **MEMORY** button



Pocket Pro Swimming has 3 specific modes available for swim training sessions or competitions. NOTE: You must erase all memorised data before moving between modes. To do this press and hold the **Memory** button and also press the **Start/Stop** button. You will then be able to select a different mode.

A: Training with stroke record

In this mode, you can define the length of the pool (25 or 50m), record the number of strokes by pool crossings, as well as times for every length.
At the end of each session you are able to recall on Pocket Pro LCD or download and view the number of strokes for every length, average stroke rate, total swim distance, average lengths per minute and total time.

B: Dual competitor time training.

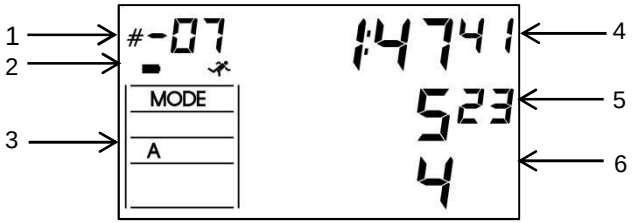
Dual mode allows comparative timing of two swimmers consecutively from a single start for training or competition. Each length can be timed individually for each swimmer. Post session analysis via the Pocket Pro LCD or from the downloaded data provides you with times for every length for each swimmer along with the gap times.

C: Training session up to 9 competitors

This timing mode allows you to time up to 9 competitors with a single mass start and individual finishes.
The result shows you individual swimmers time and gap time.

2.7. Training with stroke record (mode A)

In this mode, you define the length of the pool (25m or 50m), record the number of strokes for each length as well as each split time.
Post session you will be able to view every length with split times, strokes and distance covered. Downloading the data from Pocket Pro using the Pocket Pro Manager software provides you with an even more detailed analysis.



1. Nb of training session / number of pool lengths covered
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Total Running time (mm:ss.dc)
5. Running time of current length (mm:ss.dc)
6. Number of strokes recorded on current length

Training setting

Button **Split/Lap**: Select the pool size (25m or 50m)

Training session

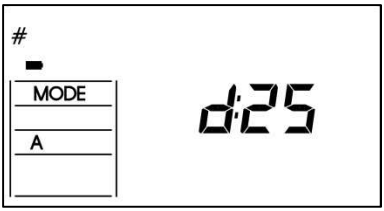
Button **Start/Stop** :	Start, Stop after each pool crossing (maximum 60) Hold down for 5 seconds : stops the training session
Button **Split/Lap** :	Increase the number of strokes

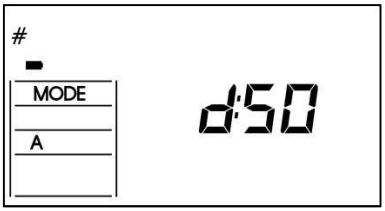
End of training session

Button **Split/Lap** :	Proceed to next training session (maximum 6)
Button **Memory** :	Select the training session to recall data (1 to 6)
Button **Split/Lap**	Hold down with together with the Memory button: View mode of selected training session
Button **Split/Lap**	(in view mode) Next page
Button **Mode**	(in view mode) Previous Page
Button **Memory**	(in view mode) Back to timing mode

Set parameters before a training session

Before a training session, it is possible to select the size of the pool (25m or 50m)
Press **Split/Lap** to select pool size
By pressing the button **Start/Stop**, you validate the pool size and start the first training session

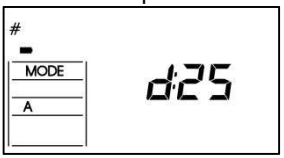




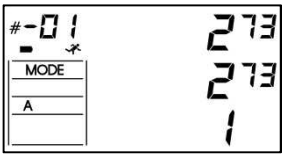
Maximum lengths to time is 60
This allows a training session of 1500m (with a pool length of 25m) and 3000 (with a pool length of 50m)

Example

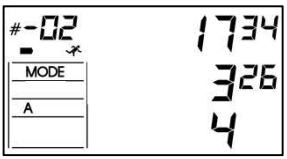
4 lengths with 25m pool



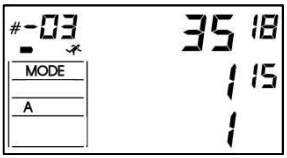
Mode A
Set the pool length of 25m (**Split/Lap**)



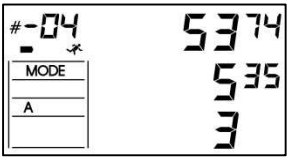
Button **Start/Stop**
Start training session
Each press of **Split/Lap** button: increases the number of strokes



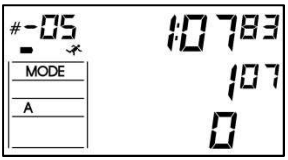
Button **Start/Stop**
End of length n° 1
Start new length (n° 2)
Stroke counter : Button **Split / Lap**



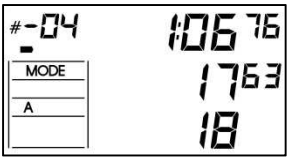
Button **Start/Stop**
End of length n° 2
Start new length (n° 3)
Stroke counter : Button **Split / Lap**

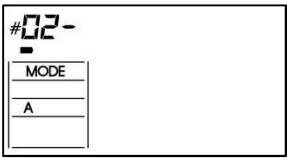


Button **Start/Stop**
End of length n° 3
Start new length (n° 4)
Stroke counter : Button **Split / Lap**



Button **Start/Stop** (push and hold down 5 sec)
End of training session
Length Counter returns back to n°4



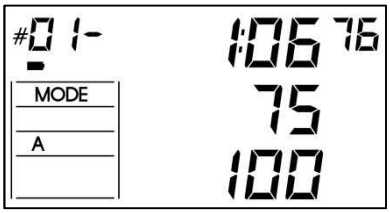


Button **Split / Lap** to move to the next training session (maximum 6)

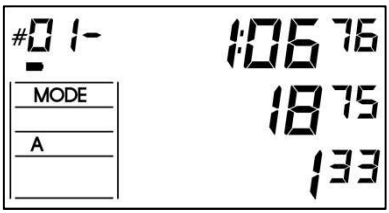
View (button Memory)

Using the **Memory** button, it is possible to scroll and view all the training sessions (from 1 to 6).
To select the training session you want to view, hold down the Memory button and press the button Split/Lap button
Next page: button **Split/Lap**
Previous page: button **Mode**

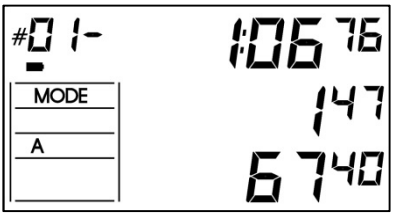
The first 3 pages (1 to 3) display global results of the training session.
The next page (4 to 63) display results for each individual length



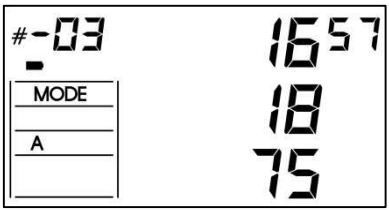
Page 1 :
Total time of training (1'06.76'')
Total number of strokes (75)
Total distance covered (100m)



Page 2 :
Total time of training (1'06.76'')
Average strokes per length (18.75)
Average distance per stroke (1.33m)



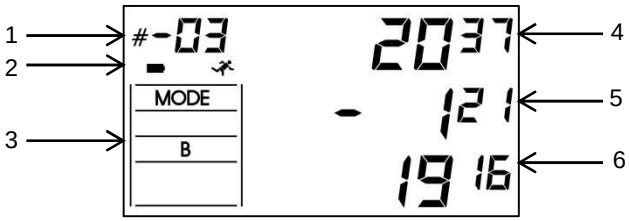
Page 3 :
Total time of training (1'06.76'')
Average Speed (m/min) : (1.47 metres/min)
Number of strokes / min : (67.40)



Page 4 - 63: (60 pool lengths maximum)
Length n° 3 (-03)
Time of Length (16.57 sec)
Number of strokes (18)
Total distance from start (75)

2.8. Dual competitor time training (mode B)

Dual mode allows comparative timing of two swimmers consecutively from a single start for training or competition. Each length can be timed individually for each swimmer. Post session analysis via the Pocket Pro LCD or from the downloaded data provides you with times for every length for each swimmer along with the gap times.



1. Training session / number of lengths
2. Battery / Mode Setting / Running status
3. Timing mode
4. Time of Lane A
5. Gap Time
6. Time of Lane B

Functions

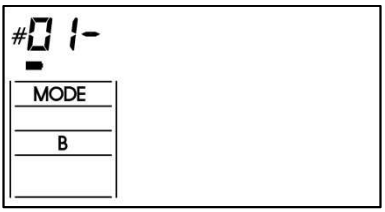
Button **Start/Stop** :	Single Start for both competitors (mass start)
	Hold down for 5 seconds : end of training session
Button **Split/Lap** :	Finish of each length, Lane A
Button **Mode** :	Finish of each length, Lane B
Button **Split/Lap**	(at the end of the training session)
	Next training session
Button **Memory &**: **Split/Lap**	Select the training session to view

At the end of each pool crossing (Lane A or B), the time is displayed for 5 seconds. When the second competitors time is displayed you will also see the gap time.

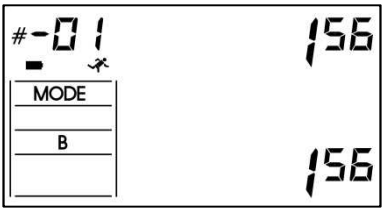
To stop the training session, hold down **Start/Stop** Button for 5 seconds
To move to the next training session press **Split/Lap** Button and the session number will increment ready for the next start.

It is possible to time up to 9 training sessions and up to 44 lengths for each competitor

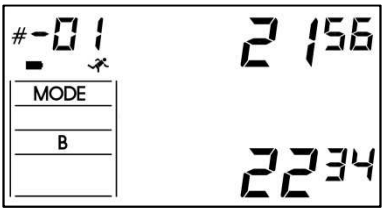
Example



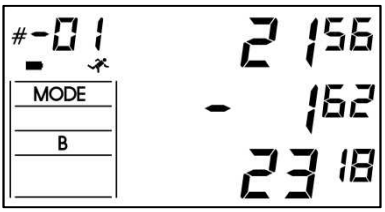
Training session n° 1



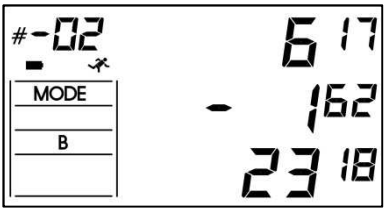
Training Session n° 1
Mass start : **Start/Stop**



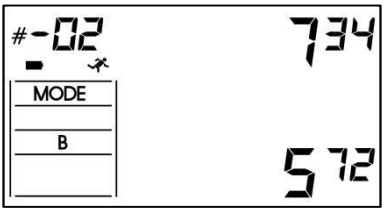
Length (n° 01)
Finish of Lane A (button **Split / Lap**)
Time : 21.56
Lane B : still swimming



Length (n° 01)
Lane A time : 21.56
Finish of Lane B (Button **Mode**)
Time : 23.18
Gap : - 1.62



Length (n° 02)
Running time continues for Lane A after 5 seconds of display split time

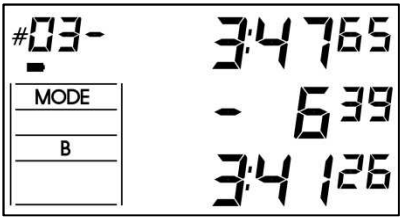


Length (n° 02)
Running time of both Lanes.

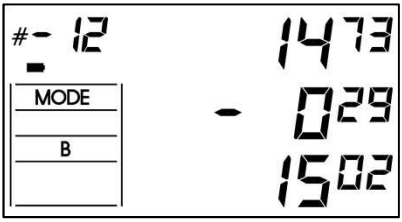
View

To recall and view timing data press the **Memory button** and hold down on the session you wish to view, whilst holding down the **Memory button** also press the **Split/Lap** button. Now you have selected your session to view you can view all split and gap times by pressing again the **Split/Lap** button to increment to the next length. Use the **Mode** button to move back to the previous length.

The first page shows you the last split result of the training session. The following pages show you each length with Time for Lane A and Lane B and the gap time.



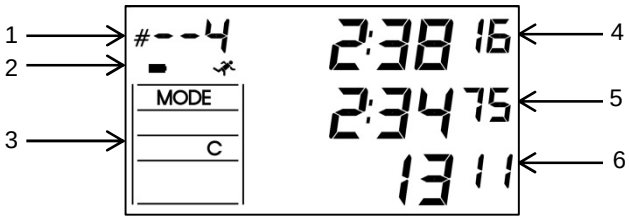
Page 1
Training Session (n° 03)
Lane A 3'47.65''
Gap -6.39''
Lane B 3'41.26''



Page 13
Training Session (n° 03)
Length n° 12 (-12)
Lane A 14.73''
Gap -0.29''
Lane B 15.02''

2.9. Training session up to 9 competitors (mode C)

This timing mode allows you to time up to 9 competitors with a single mass start and individual finishes. Also a maximum of 60 sessions can be recorded.
The result displays every finisher (in order of arrival) the time and the gap time with best time



1. Training session / arrival number in sequential mode
2. Battery / Mode Setting / Running status
3. Timing mode
4. Running time from start
5. Finish time of each competitor
6. Gap with the best time

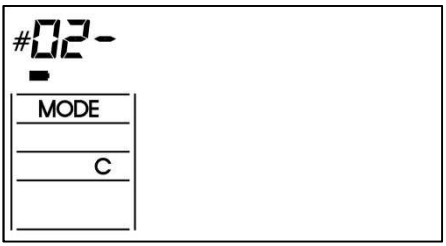
Functions

Button **Start/Stop** : Mass start / individual finish (maximum 9)

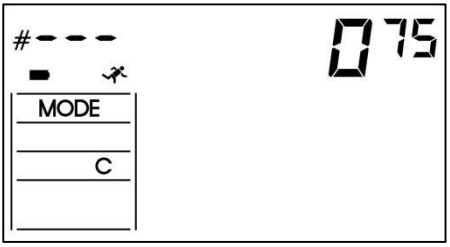
Button **Split/Lap** : Press to finish the training session (when all competitors are finished) to move to the next session

Button **Memory** : Press the **Memory** button and hold down on the session you wish to view. Whilst holding down the **Memory** button also press the **Split/Lap** button and release. Now press **Split/Lap** button to move through each competitors time and gap time. To move back to the previous time press the **Mode** button.
To exit viewing press the **Memory** button and you are ready to start the next session.

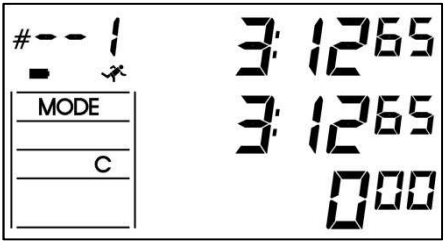
Example



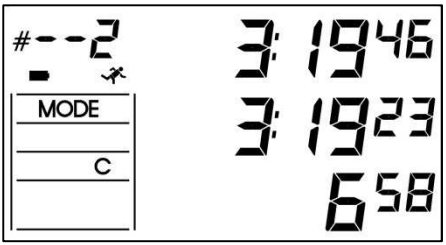
Training session n° 2 (02-)



Button **Start/Stop**
Running time



Button **Start/Stop**
Competitor finish n°1 (3'12.65'')
Gap : 0.00'' (first arrival)



Button **Start/Stop**
Competitor n° 2 (3'19'23)
Gap : 6.58''

3. Recommendations

Although the Pocket Pro can be used indoors and outdoors, optimal viewing and protection is best when the display is in the shade or covered from direct sunlight and rain

Never immerse the Pocket Pro in water

The Pocket Pro is developed to endure light rain.
The USB socket is protected by the black rubber, and prevents any water ingress

It is very important and recommended to keep the rubber in place at all times when not using the USB connection

The optimal visibility of LCD is when the Pocket Pro is protected from direct sunlight

The Pocket Pro can overheat in excessive direct sunlight

The LCD Plexiglas is fragile. It is not recommended to clean it with a solvent or alcohol

IMPORTANT
A slightly damp cloth is recommended for cleaning the Pocket Pro

4. Download a new version of Firmware

Program downloads and new releases of the TAG Heuer firmware “up loader” are available free of charge on our website www.tagheuer-timing.com

For this operation, you need to have:
- Mini-USB cable HL545-3
- The software «TAGHeuerFirmmanager.exe » version minimum V10.0

Procedure
- Copy the software «TAGHeuerFirmManager.exe » onto your hard disk drive
- Connect the Mini-USB cable (HL545-3) to the PC and to the Pocket Pro
- Run the software « TAGHeuerFirmManager.exe »
- Select the COM Port
- Select the file: Update (HL400_xxx.dat)
- Press START on the software
- Press and hold the reset button on Pocket Pro and release when prompted
- As soon as the upgrade is downloaded into the HL400, validate the software with OK
- The HL400 is ready to use

5. Technical specification

5.1. Pocket Pro characteristics

-	Power	5 VDC (rechargeable with USB cable)
-	Internal battery	600mAh / 3.7V
-	Autonomy	35 days (in use) after full charge
-	Shell	Aluminium – PVD surface treatment
-	Weight	160 g
-	Precision	+/- 2 sec / month Calibration available
-	Display	LCD 3 lines of 6 characters Battery level / Timing Mode
-	Size of characters	7mm height
-	Accuracy	1/100th second
-	Memory	800 stored times
-	Temperature range	–20°C to +60°C

5.2. USB Connector

Pin	Description
1	5V
2	D-
3	D+
4	TAG Heuer Photocell
5	GND

6. Quick Guide

Reset memory
Buttons: Start/Stop + Memory
Change mode:
Clear Memory (Start/Stop + Memory)
Button: Mode
Power off
Buttons: Memory + Mode (hold down together for 5 seconds)
Recall recorded times
Button: Memory
Setting (Date / Time / CD)
Button: Memory to select the digit
Button: Split/Lap to change value
Button: Mode to validate the selection
Stopwatch
Button: Start/Stop: start or stop counter
Button: Split/Lap: memorize Split/Lap
Button: Mode: select display Split or LAP or both
Button: Memory: recall split/lap memorized
Count Down
Button: Start/Stop: Start or Stop counter
Button: Split/Lap: reset the preselected Count Down
Button: Memory: countdown setting
Button: Mode: Select single Count Down or Multi Count Down (CD blinking)
Time (function manual back-up with Time-of-Day)
Button: Start/Stop + Split/Lap: Set Time-of-Day (+ 1 minutes)
Button: Start/Stop: Synchro + Start
Button: Split/Lap: Memorize Time-of-Day
Button: Memory: recall/view memorized time

Mode A

Configuration

Button: Split/Lap:	Set the pool size (25m or 50m)
	Timing
Button: Start/Stop:	Mass start
	Finish for each length
	Hold down for 5 sec to finish the training session
Button: Split/Lap:	Record the strokes (one press for each stroke)

At Finish

Button : Split/Lap	Press and hold for 5 sec to move to the next session

Viewing

Button: Memory:	Choose the training session (1 to 6)
Button Memory + Split/Lap	Select the training session to view
Button Split/Lap	Next page
Button: Mode	Previous page
Button Memory	Back to timing mode

Mode B

Timing

Button: Start/Stop:	Mass start (2 competitors)
	Hold down 5 sec to finish
Button : Split/Lap :	Finish the length for Lane A
Button : Mode :	Finish the length for Lane B

At Finish

Button : Split/Lap	Move to the next training session

Viewing

Button: Memory:	Scan all the training session (1 to 6)
Button Memory + Split/Lap	Select the training session to view
Button Split/Lap	Next page
Button: Mode	Previous page
Button Memory	Back to timing mode

Mode C

Timing

Button: Start/Stop:	Mass start (up to 9 competitors)
	Individual finish (in order of finishing)
Button: Split/Lap:	Press to move to the next session

View

Button: Memory:	Scan all the training session (1 to 6)
Button Memory + Split/Lap	Select the training session to view
Button Split/Lap	Next page
Button: Mode	Previous page
Button Memory	Back to timing mode

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